

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

Commission Seeks Public Comment on
Spectrum Policy Task Force Report

ET Docket No. 02-135

REPLY COMMENTS OF FRED MOORE

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I would like to thank the Task Force and the Commission for creating an opportunity to offer my reply comments on the November, 2002 Report of the Spectrum Policy Task Force. I have but a couple of brief remarks.

First, I am one of those commenting to suggest that certain new deployments of unlicensed devices be above some frequency (Moore, 27 Jan 03, at 6). My remark is intended to apply specifically (though perhaps not exclusively) to urban computer wireless networking. I had suggested a cutoff frequency of 6 GHz, based in part on the engineering work of Motorola (Sharkey, 2002 or Sharkey, et. al, 2002) concerning the value of frequencies below 6 GHz for [urban] mobile users, and in part on my own engineering estimates of the feasibility of accessing at low cost the radio frequency spectrum at EHF frequencies (Moore, 1999).

Recent developments in the fabrication of sub-0.2 micron gate width transistors (Moore, 1999 at 171) and of micromechanical antenna structures (Moore, 1999 at 203-4) strongly imply that fixed wireless networking could be conducted at EHF frequencies at essentially the same cost as at 1 to 6 GHz. On the other hand, the propagation environment of urban mobile users implies the use of frequencies below 6 GHz for mobile applications. There is a natural and physical bifurcation of terrestrial uses, based on the underlying physical characteristics of the radio frequency spectrum, and our new found competencies in device fabrication.

What is in the public interest, then, is to use what we are given in ways that best fit the physical nature of the resource, to the best of our understanding of the engineering art, and for the benefit of others. An unexplained reference to the public interest (Itron, Reply Comments at 3) cannot justify the displacement or degradation of past institutional choices. Instead, timely public – private partnering and industry coordination could help accelerate the deployment of low cost EHF wireless networking solutions.

Second, some participants have suggested that voluntary guidelines or even no rules at all (Shepard, Comments) can work for unlicensed radio spectrum. It would be informative to revisit human nature (Luther, 1523) and certain past failed choices, like eleven meters. My impression is that voluntary guidelines (or self-regulation) can work only with a technically astute user community, and then only if the state remains willing to impose sanctions. Let us put fantasy aside.

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